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AMSAT NEWS SERVICE
ANS-241

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to: ans-editor [at] amsat.org

You can sign up for free e-mail delivery of the AMSAT News Service Bulletins via the ANS List; to join this list see: https://mailman.amsat.org/postorius/lists/ans.amsat.org/

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ANS-241 AMSAT News Service Weekly Bulletins

To: All RADIO AMATEURS
From: Radio Amateur Satellite Corporation
712 H Street NE, Suite 1653
Washington, DC 20002

DATE 2021 Aug 29

AMSAT-EA GENESIS satellites may launch September

Spain’s national amateur radio society, the URE, report two AMSAT-EA GENESIS satellites are expected to be launched on September 2, 2021.

A translation of the URE post reads:

The GENESIS-L and GENESIS-N satellites, designed and built by AMSAT-EA in collaboration with students from the European University and ICAI, will be launched, in a first attempt, on September 2, once the American company Firefly has carried out the static test of the Alpha launcher, this being the last step before its launch. The vehicle is ready for takeoff on its platform from Vanderberg Air Force Base in California and carries, for this inaugural flight, many other satellites from various organizations and universities.

The GENESIS are digital repeating satellites of ASK and CW and also carry Applied Ion Systems’ AIS-gPPT3-1C experimental ion thrusters.

The working frequencies of the satellites are as follows:

GENESIS-L
145.875 MHz uplink, Modes: CW, ASK 50 bps

436.875 MHz downlink CW, ASK 50 bps, am2sat callsign

GENESIS-N
145.888 MHz uplink, Modes: CW and ASK 50 bps
436.888 MHz downlink CW ASK 50 bps, am3sat callsign
The description of the telemetry and the mode of operation of its repeaters can be found in the following links:

Link to telemetry transmissions description (in English)
https://www.amsat-ea.org/app/download/12293076/AMSAT+EA+-+GENESIS+transmissions+description.pdf

Source URE https://www.ure.es/satelites-genesis-de-amsat-ea-2/

[ANS thanks AMSAT-UK for the above information and the translation]

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Keeping Amateur Radio in Space.
https://amsat.org/product-category/hardware/

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Hamfests, Conventions, Maker Faires, and Other Events

The 2021 HamXposition is taking place September the 11th and 12th, in Marlborough, Massachusetts. The convention has a new home at the Best Western Royal Plaza Hotel & Trade Center. If you would like to volunteer at the booth contact Phil Smith w1eme at amsat.org.

REGISTRATION IS NOW OPEN for the 39th AMSAT Space Symposium and Annual General Meeting
October 29-31, 2021
Crowne Plaza AiRE
3 Appletree Square, Bloomington, MN 55245.
Complete information and registration at tinyurl.com/ANS-227-SYMPOSIUM.

RRRA Hamfest & ARRL Dakota Division Convention
Saturday, September 25, 2021, RRV Fairgrounds Hartl AG Building, 1805 Main Ave West, West Fargo, ND 58078
https://rrra.org/cal/2021/09/25/rrra-hamfest-arrl-dakota-division-convention
2021 Wyoming ARRL Section Convention, Saturday, October 9, 2021, Event Center at Archer, 3921 Archer Pkwy, Cheyenne, Wyoming 82007
https://wyhamcon.org/site

Updates may be found at: https://www.amsat.org/other-events/

AMSAT Ambassadors provide presentations, demonstrate communicating through amateur satellites, and host information tables at club meetings, hamfests, conventions, maker faires, and other events.

Ambassador Clint Bradford, K6LCS, has online presentations scheduled for the following clubs:
Sonoma (CA) ARC
STARS - Easy Coast
Fairlawn NJ
Portland OR
Longmont CO
SW Florida
Contact Clint at http://www.work-sat.com or by phone at 909-999-SATS (7287) to arrange a presentation.

[ANS thanks Paul Overn, KE0PBR, AMSAT Events page manager, and Clint Bradford, K6CLS for the above information]

Satellite Shorts From All Over

+ At Space Symposium (https://www.spacesymposium.org/), Aerospace Corp proposed a new form factor alternative to CubeSats: DiskSats. These disks could be 1 m in diameter and 2.5 cm thick, allowing enough surface area for 200 watts of solar panels. On a CubeSat, this would require deployables. “The point of DiskSat is that it complements cubesats for missions that consist primarily of electronics that need higher power.” A stack of 20 plates is also easier to launch on a small launch vehicle than 20 CubeSats. It feels like this borrows a lot from Starlink’s form factor, and potentially, its deployment mechanism. (ANS thanks The Orbital Index for the above information.)

+ At SmallSat (https://smallsat.org/), Florence Tan from NASA mentioned that NASA’s SMD has been shifting from very small CubeSats to 6U+ CubeSats, ESPA-class spacecraft, and constellations. Roger Walker from ESA mentioned a similar trend of moving from 3U to 6U and then 12U CubeSats for operational science missions, facilitated by accurate COTS pointing and propulsion.(ANS thanks The Orbital Index for the above information.)

+ BryceTech just released their very thorough Smallsats by the Numbers Report, which they define as satellites under 600kg. 1,282 spacecraft launched in 2020, of which 94% were smallsats, representing 43% of the total upmass—of these, 937 were Starlink or OneWeb. A whopping 40% of all smallsats launched in the last 10 years launched in 2020. See also this interesting Tableau report on the uses, locations, and life-spans of satellites. (ANS thanks The Orbital Index for the above information.)

+ Space station spacewalk postponed by astronaut medical issue: A planned spacewalk outside the International Space Station Tuesday was postponed after NASA astronaut Mark Vande Hei was diagnosed with a pinched nerve, which NASA described as a “minor medical issue.” Vande Hei planned to head outside the space station Tuesday with Japanese crewmade Akihiko Hoshide for a nearly seven-hour spacewalk to install a support bracket and modification kit that will enable the attachment of upgraded solar arrays set to arrive on a future cargo mission. The astronauts also planned to replace a floating point measurement unit, a device that measures the electrical charging potential of the space station solar arrays. NASA announced the postponement of the spacewalk Monday, describing Vande Hei’s condition as a “minor medical issue” and not a medical emergency. Additional detail at: https://bit.ly/3mCJSXc
(ANS thanks Stephen Clark, Spaceflight Now for the above information.)

+ Launch of lunar CubeSat moved from Virginia to New Zealand: The launch of a miniature trailblazer probe for NASA’s planned Gateway lunar space station has been moved from Rocket Lab’s new launch pad in Virginia to the company’s spaceport in New Zealand, officials recently announced. NASA’s Cislunar Autonomous Positioning System Technology Operations and Navigation Experiment, or CAPSTONE, mission will test deep space navigation and communications technology in the vicinity of the moon. CAPSTONE will also demonstrate maneuvers to enter and operate in a near rectilinear halo orbit, an elliptical orbit around the moon that will be home to the Gateway, a critical piece of NASA’s architecture to return humans to the lunar surface. The Gateway is a mini-space station NASA intends to use as a staging point for crewed lunar landings later in the 2020s. Additional info at:https://bit.ly/3BjP8mP
(ANS thanks Stephen Clark, Spaceflight Now for the above information.)

Join AMSAT today at https://launch.amsat.org/

In addition to regular membership, AMSAT offers membership to:

* Societies (a recognized group, clubs or organization).
* Primary and secondary school students are eligible for membership at one-half the standard yearly rate.
* Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status.
* Memberships are available for annual and lifetime terms.

Contact info [at] amsat.org for additional membership information.

73 and remember to help Keep Amateur Radio in Space!

This week's ANS Editor, Jack Spitznagel, KD4IZ
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